

Sep 14 04 10:59a

**Virginia Department of Labor & Industry**

Occupational Safety and Health Compliance

Inspection Number: 307228288

Inspection Dates: 03/18/2004-

Issuance Date: 09/14/2004

Citation and Notification of Penalty

Company Name: Virginia Department of Transportation

Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 1 Item 8 Type of Violation: **Serious**

1910.147(c)(7)(iii)(B): Located at the Hampton Roads Bridge Tunnel facility, Hampton, Virginia, employees were performing maintenance activities on machinery and equipment and had not received retraining on energy control procedures where the employer had reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures. The inspection revealed that equipment was being de-energized but no locks applied to the energy isolating device; and that equipment was being de-energized and a lock applied but not in such a way that would keep the energy isolating device in a "safe" or "off" position; and that group lockout procedures were not being used in accordance with the regulation. This exposed employees to electrocution or struck-by hazards and other possible injuries associated with the inadvertent release of electrical, hydraulic, pneumatic, thermal and mechanical energy during maintenance operations.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** 10/01/2004**Proposed Penalty:** \$0.00

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 11 of 33

OSHA-2(Rev. 6/93)

**Virginia Department of Labor & Industry**  
Occupational Safety and Health Compliance

Inspection Number: 307228288  
Inspection Dates: 03/18/2004-  
Issuance Date: 09/14/2004



**Citation and Notification of Penalty**

Company Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

**Citation 1 Item 9 Type of Violation: Serious**

1910.147(d)(4)(i): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that lockout or tagout devices had been affixed to ventilation fan breaker switches by authorized employees when the switches were turned to the "safe" or "off" position. The employees had de-energized the supply and exhaust ventilation fans they wanted to perform maintenance on by "throwing" the breaker switches, but did not attach their locks. If the switches were inadvertently operated, the employees performing maintenance on the ventilation supply and exhaust fans could be exposed to the unexpected release of electrical or mechanical energy and their associated injuries.

**Abatement Documentation Required**

**Date By Which Violation Must be Abated:** 09/20/2004  
**Proposed Penalty:** \$0.00

The alleged violations below have been grouped because they involve similar or related hazards that may increase the potential for illness or injury resulting from an accident.

**Citation 1 Item 10a Type of Violation: Serious**

1910.147(d)(4)(ii): Located at the Hampton Roads Bridge Tunnel facility, Hampton, Virginia, the employer did not ensure that where a lockout had been performed for maintenance on an installed fire pump, that the attached lockout device was affixed in a manner that would hold the wheel used for turning the fire pump isolation valve in a "safe" or "off" position. The lock was found merely hanging between the spokes of the wheel allowing the wheel to still be turned without removing the lock. This exposed employees to possible struck by hazards and their associated injuries from the inadvertent release of hydraulic energy (water pressure) if the valve was operated.

**Abatement Documentation Required**

**Date By Which Violation Must be Abated:** 09/20/2004  
**Proposed Penalty:** \$0.00

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.



Sep 14 04 11:00a

**Virginia Department of Labor & Industry**  
Occupational Safety and Health ComplianceInspection Number: 307228288  
Inspection Dates: 03/18/2004-  
Issuance Date: 09/14/2004**Citation and Notification of Penalty**Company Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663**Citation 1 Item 10b Type of Violation: Serious**

1910.147(f)(3)(ii)(D): Located at the Hampton Roads Bridge Tunnel facility, Hampton, Virginia, the employer did not ensure that each employee performing servicing or maintenance on equipment or machinery to include installed fire pumps had affixed their personal lockout or tagout device to the group lockout device, group lock box, or comparable mechanism when the employees began work. This exposed employees to possible struck by hazards and their associated injuries from the inadvertent release of hydraulic energy (water pressure) if the valve was operated.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** 09/20/2004

The alleged violations below have been grouped because they involve similar or related hazards that may increase the potential for illness or injury resulting from an accident.

**Citation 1 Item 11a Type of Violation: Serious**

1910.219(c)(2)(i): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that horizontal shafting on flood gate machinery (seven feet or less from the floor) had been guarded against possible accidental employee contact when employees are required to periodically test the flood gates or operate the flood gates in the event of an emergency. This exposed employees to possible struck against hazards and their associated injuries.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** 10/18/2004  
**Proposed Penalty:** \$ .00

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 13 of 33

OSHA-2(Rev. 6/93)

Sep 14 04 11:00a

**Virginia Department of Labor & Industry**  
Occupational Safety and Health ComplianceInspection Number: 307228288  
Inspection Dates: 03/18/2004-  
Issuance Date: 09/14/2004Citation and Notification of PenaltyCompany Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663Citation 1 Item 11b Type of Violation: **Serious**

1910.219(f)(1)(i): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that exposed gears on the flood gate machinery had been guarded against possible accidental employee contact by one of the methods specified in 1910.219(f)(1)(i), (f)(1)(ii) or (f)(1)(iii). Employees are required to periodically test the flood gates or operate the flood gates in the event of an emergency. This exposed employees to possible struck against hazards and their associated injuries.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** **10/18/2004**Citation 1 Item 12 Type of Violation: **Serious**

1910.219(f)(3): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employees had removed the guard on a motor driven chain and sprocket located on the floor of the Vent Building. The chain and sprocket drive was for electrically operated vent louvers on an installed ventilation system. The employer did not ensure that the guard was re-installed so that the chain and sprocket was enclosed to protect the employees from accidental contact with the chain and sprocket drive. This could have resulted in "caught-in" and "crushing" injuries to employees.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** **09/20/2004**  
**Proposed Penalty:** **\$0.00**

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 14 of 33

OSHA-2(Rev. 6/93)



Sep 14 04 11:01a

Virginia Department of Labor & Industry  
Occupational Safety and Health Compliance

Inspection Number: 307228288  
Inspection Dates: 03/18/2004-  
Issuance Date: 09/14/2004

Citation and Notification of Penalty

Company Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 1 Item 13 Type of Violation: **Serious**

1910.303(g)(2)(i): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that insulated electrical wires that were protruding from the basement wall in a ventilation building had been guarded against accidental employee contact by removing the wires or covering the wires with an approved enclosure or cabinet, or by any of the methods specified in 1910.303(g)(2)(i)(A) through (D). This exposed the employees to possible electrocution hazards and their associated injuries.

**Abatement Documentation Required**

Date By Which Violation Must be Abated: **09/20/2004**  
Proposed Penalty: **\$ .00**

Citation 1 Item 14 Type of Violation: **Serious**

1910.332(b)(1): Located at the Hampton Roads Bridge Tunnel facility, Hampton, Virginia, the employer did not ensure that employees had been trained in the safety related work practices that pertain to their respective job. The employees were working on or near energized electrical circuits while performing maintenance on the tunnel lighting system. The employees did not utilize or have available the required electrical personal protective equipment, or written safety procedures for de-energizing circuits or equipment when working on the tunnel lighting system. This exposed the employees to electrocution hazards and their associated injuries.

**Abatement Documentation Required**

Date By Which Violation Must be Abated: **09/24/2004**  
Proposed Penalty: **\$ .00**

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 15 of 33

OSHA-2(Rev. 6/93)

Sep. 14 04 11:01a

Virginia Department of Labor & Industry  
Occupational Safety and Health Compliance

Inspection Number: 307228288  
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Issuance Date: 09/14/2004

Citation and Notification of Penalty

Company Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 2 Item 1 Type of Violation: **Willful**

1910.23(c)(3): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that a standard railing as specified in 1910.23(e)(1) was installed on the walkway platform inside the east and west bound tunnel tubes (1910.23(e)(1) provides that a "standard railing" shall consist of a top rail, intermediate rail and posts). The existing hand rail system has a top rail, but no intermediate/midrail. The employees would perform various maintenance activities from the platform walk way to include, but not limited to:

- a. Portable fire extinguisher inspection/replacement.
- b. Fire plug valve repair.
- c. Fire alarm and fire alarm sensor repair/replacement.
- d. Tunnel lighting repairs or bulb replacement of lights located over the walkway platform.
- e. traffic signal repair/replacement.

Where there is no intermediate/midrail, the employees could fall between the top rail of the existing hand rail system and walkway platform onto the roadway and into the path of motor vehicles traveling at speeds of approximately 55-mph. This exposed employees to struck by hazards and their associated injuries.

VDOT officials informed Department of Labor and Industry officials by letter dated January 8, 2003, that employees would not be permitted to access the walkway platforms inside the east and west bound tunnel tubes until a midrail was added. The inspection revealed that, with the knowledge of management representatives, employees have regularly accessed the walkways since at least December, 2003, without the benefit of a lane closure to protect them from exposure to vehicular traffic.

**Abatement Documentation Required**

Date By Which Violation Must be Abated: **09/20/2004**  
Proposed Penalty: **\$ .00**

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 16 of 33

OSHA-2(Rev. 6/93)



Sep 14 04 11:02a

Virginia Department of Labor & Industry  
Occupational Safety and Health Compliance

Inspection Number: 307228288  
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Issuance Date: 09/14/2004

Citation and Notification of Penalty

Company Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 2 Item 2 Type of Violation: **Willful**

1910.28(a)(2): Located at the Hampton Roads Bridge Tunnel, Hampton, Virginia, the employees were working from a truck-mounted tubular welded frame scaffold/platform while performing tunnel lighting maintenance. The employer did not ensure that the temporary scaffold/platform had been anchored to the truck bed in a sound and rigid fashion and so that it was capable of carrying the maximum intended load without possible uplift or displacement of the scaffold/platform. The scaffold/platform was attached to the bed of the Ford F-Series dump truck with a single nylon web strap. The scaffold/platform could become displaced and fall off the back of the truck if the strap failed while employees were traveling on the scaffold/platform. This exposed employees to falls from elevation or struck against hazards and their associated injuries.

Management representatives were aware that the method being used to attach the scaffold/platform to the dump truck (a single nylon web strap) had not been approved by the District Safety Engineer or the HRD Professional Engineer for use, and were aware that the scaffold/platform was not to be secured in that fashion without such approval.

**Abatement Documentation Required**

Date By Which Violation Must be Abated: 09/23/2004  
Proposed Penalty: \$ .00

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 17 of 33

OSHA-2(Rev. 6/93)

Sep 14 04 11:02a

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Occupational Safety and Health Compliance

Inspection Number: 307228288

Inspection Dates: 03/18/2004-

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Citation and Notification of Penalty

Company Name: Virginia Department of Transportation

Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 2 Item 3 Type of Violation: **Willful**

1910.28(a)(5): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that a truck-mounted elevated work scaffold/platform was not moved horizontally while it was in use or occupied. The employees were working and riding on the elevated scaffold/platform inside the east bound tunnel. The truck pulled out of the east bound tunnel, made a u-turn on the south island and proceeded to drive into the west bound tunnel. The employees were sitting on benches in the scaffold/platform when the truck entered the west bound tunnel. The employees' heads struck against the concrete tunnel ceiling as the truck entered the tunnel resulting in one employee fatality and one employee injury (east bound tunnel is approximately 16'6" tall and the west bound tunnel is approximately 13'11" tall).

VDOT apparently had a verbal policy allowing employees to ride in the scaffold/platform while in the HRBT tunnels and moving from one light to the next light. The verbal policy apparently prohibited employees from riding on the scaffold/platform when exiting or entering the tunnels. VDOT did not have, nor did they apply for a variance from §1910.28(a)(5) with the Department of Labor and Industry (pursuant to Va. Code §40.1-6(9)) to allow employees to ride in the scaffold/platform. In addition, management representatives were aware of and permitted employees on a regular basis to ride in the scaffold/platform when entering or exiting the HRBT tunnels.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** 09/20/2004**Proposed Penalty:** \$0.00

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Citation and Notification of Penalty

Page 18 of 33

OSHA-2(Rev. 6/93)



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Occupational Safety and Health Compliance

Inspection Number: 307228288

Inspection Dates: 03/18/2004-

Issuance Date: 09/14/2004

Citation and Notification of Penalty

Company Name: Virginia Department of Transportation

Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 2 Item 4 Type of Violation: **Willful**

1910.132(a): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, employees did not use personal protective equipment to protect extremities, in the form of a personal fall arrest system (safety harness and lanyard) while working from a temporary truck-mounted elevated work scaffold/platform to perform maintenance work inside the tunnels, including tunnel lighting maintenance. Employees were exposed to fall hazards and potential crushing and struck-by hazards while using and traveling in the truck-mounted platform/scaffold. The scaffold/platform was constructed of a tubular welded aluminum frame and platform with aluminum hand rails and midrails and was mounted on the bed of a dump truck. The scaffold/platform was designed and built to have connections to be used as restraint anchorage points for safety harnesses and lanyards. Management representatives were aware that the truck-mounted scaffold/platform would be subject to being struck-by vehicles traveling in the tunnel and that employees that were not tied-off while working from the scaffold/platform could be ejected from the scaffold/platform. Management representatives knew that employees were not using personal fall arrest systems while working from the scaffold/platform.

**Abatement Documentation Required****Date By Which Violation Must be Abated:** 09/21/2004**Proposed Penalty:** \$0.00

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Citation and Notification of Penalty

Page 19 of 33

OSHA-2(Rev. 6/93)

Sep 14 04 11:05a

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Occupational Safety and Health Compliance

Inspection Number: 307228288  
Inspection Dates: 03/18/2004-  
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Citation and Notification of Penalty

Company Name: Virginia Department of Transportation  
Inspection Site: Hampton Roads Bridge Tunnel, Hampton, VA 23663

Citation 2 Item 5 Type of Violation: **Willful**

1910.333(a)(1): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, the employer did not ensure that live electrical parts of the tunnel lighting system were de-energized before employees performed maintenance and repair on light receptacles. Employees engaged in electrical "hot work" during maintenance and repair of tunnel lighting systems with potential voltages from 277 to 480 volts. Management representatives were aware that employees engaged in "hot work" activities instead of de-energizing the lights through the use of breakers.

(a) In one operation, the employees would pull a fuse in the lighting receptacle and remove the lighting receptacle wiring cover. However, the terminal board still had an exposed, energized 277 volt wire with which employees could make contact.

(b) Some lighting receptacles had energized wires running through the back of the receptacle that actually went to another light receptacle. These wires would not be de-energized by pulling the fuse for the receptacle that was being worked on, and employees were exposed to these wires as well.

IN THE ALTERNATIVE

1910.333(a)(2): Located at the Hampton Roads Bridge Tunnel Facility, Hampton, Virginia, employees were engaged in electrical "hot work" during maintenance and repair of tunnel lighting systems with potential voltages from 277 to 480 volts. Employees were not protected against contact with the energized circuit parts either directly with any part of their body or indirectly through some other conductive object. Management representatives were aware that employees were engaged in "hot work" activities without either isolating employees from contact with energized parts (e.g. use of properly rated insulating material around energized parts), or the wearing of the appropriate personal protective equipment.

(a) In one operation, the employees would pull a fuse in the lighting receptacle and remove the lighting receptacle wiring cover. However, the terminal board still had an exposed, energized 277 volt wire with which employees could make contact.

(b) Some lighting receptacles had energized wires running through the back of the receptacle that actually went to another light receptacle. These wires would not be de-energized by pulling the fuse for the receptacle that was being worked on, and employees were exposed to these wires as well.

Abatement Documentation Required

Date By Which Violation Must be Abated:

09/23/2004

Proposed Penalty:

\$ .00

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Citation and Notification of Penalty

Page 20 of 33

OSHA-2(Rev. 6/93)